

Figure 1A (Prior Art)

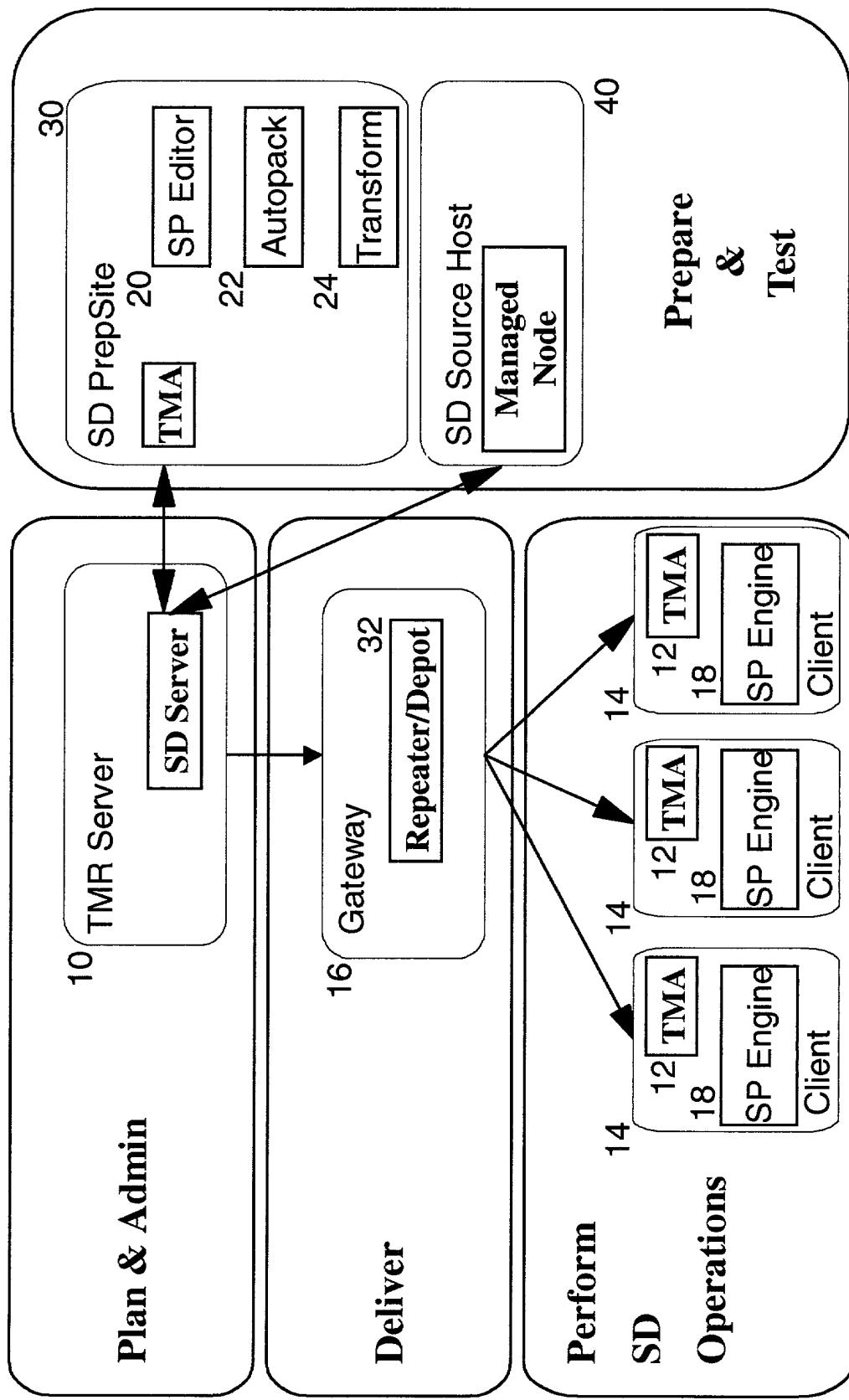


Figure 1B

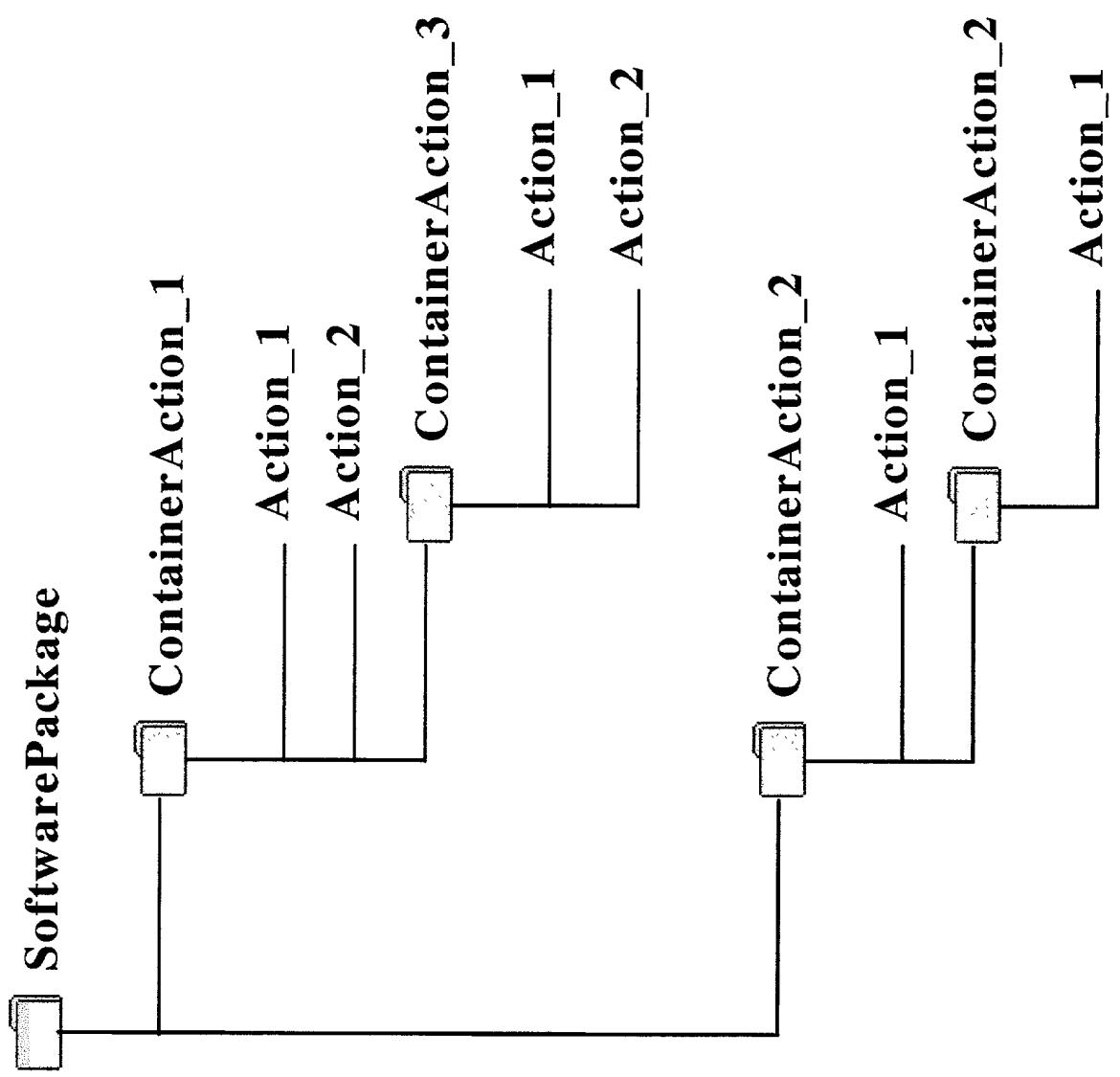


Figure 2

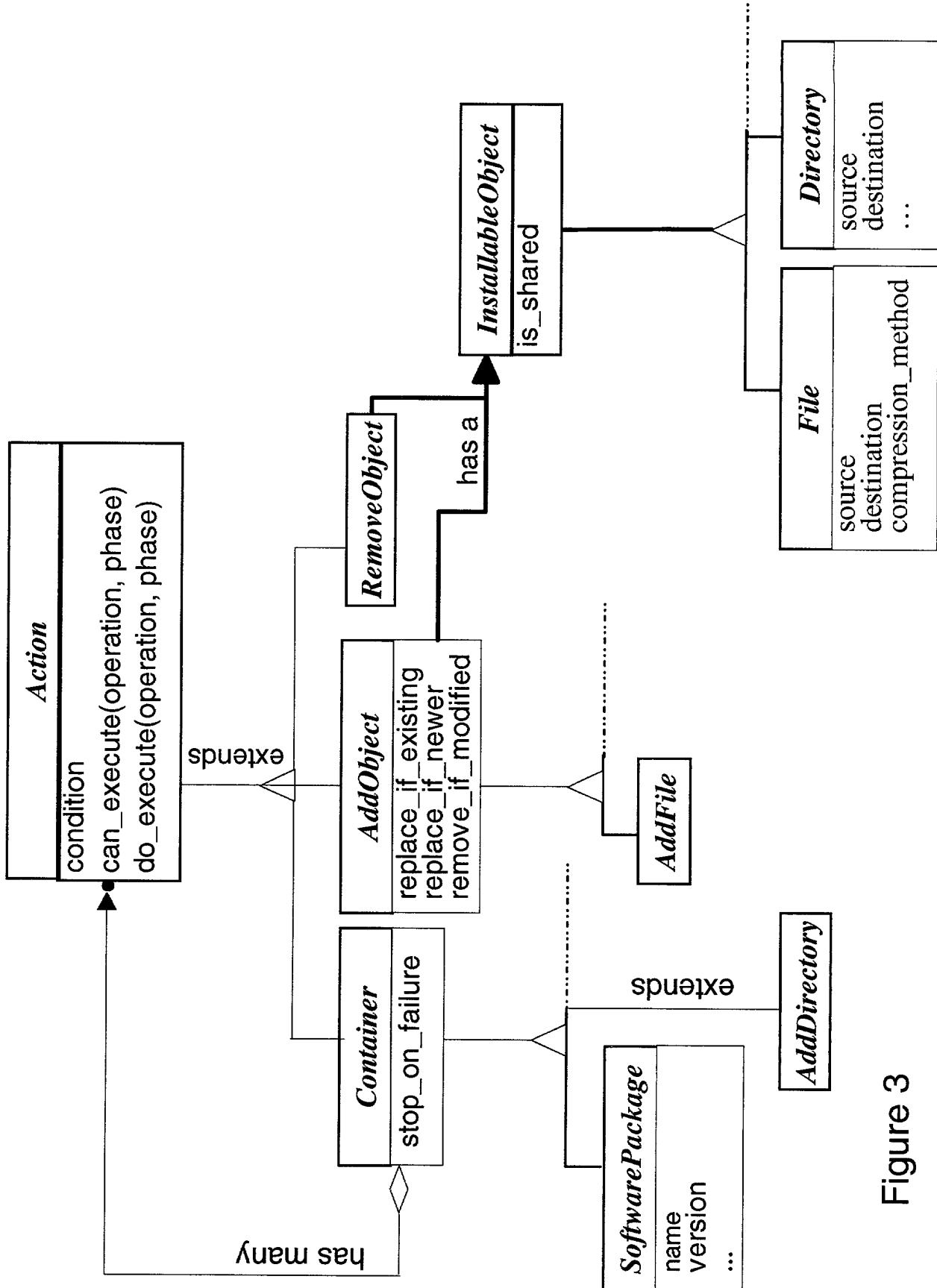


Figure 3

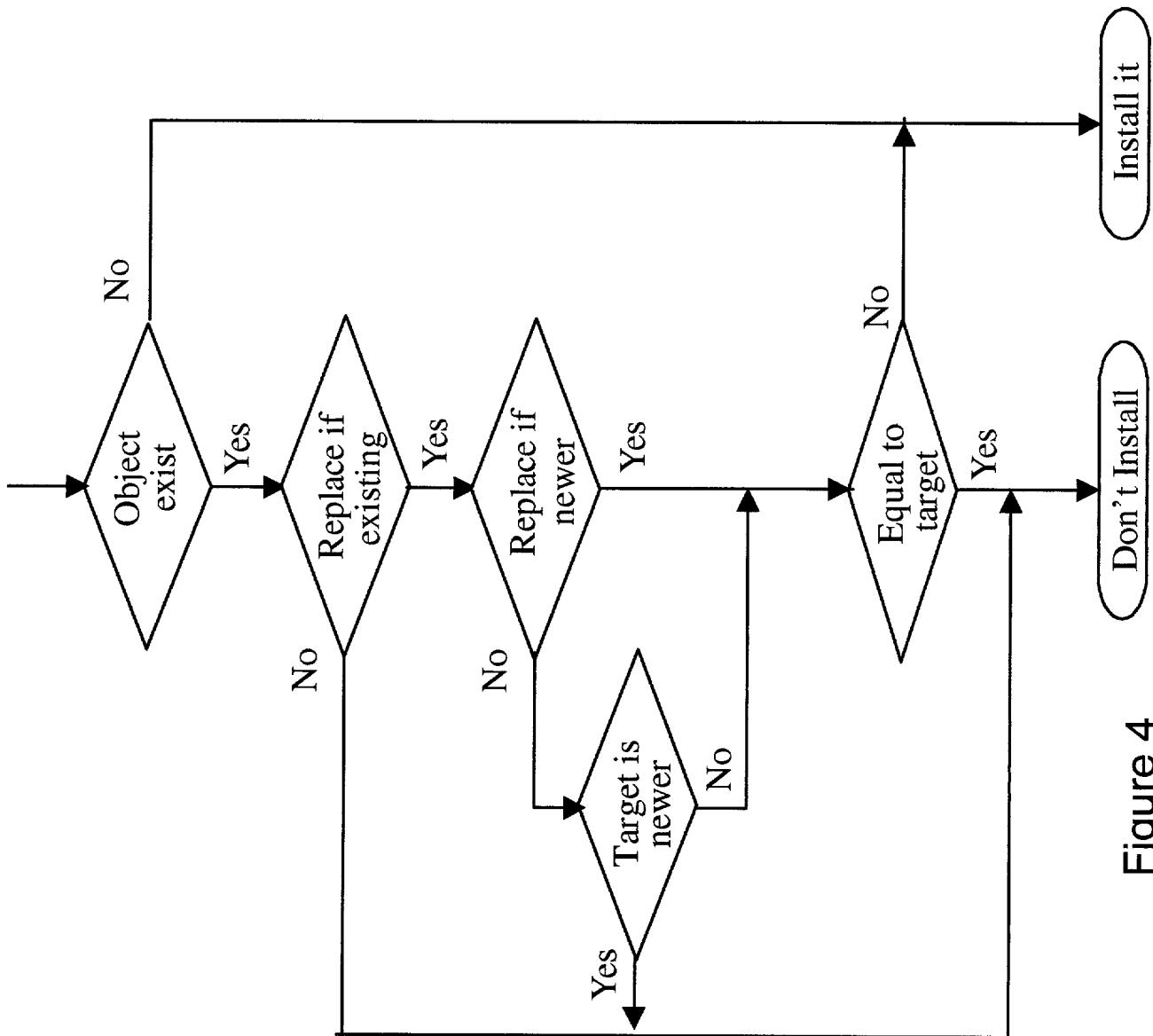
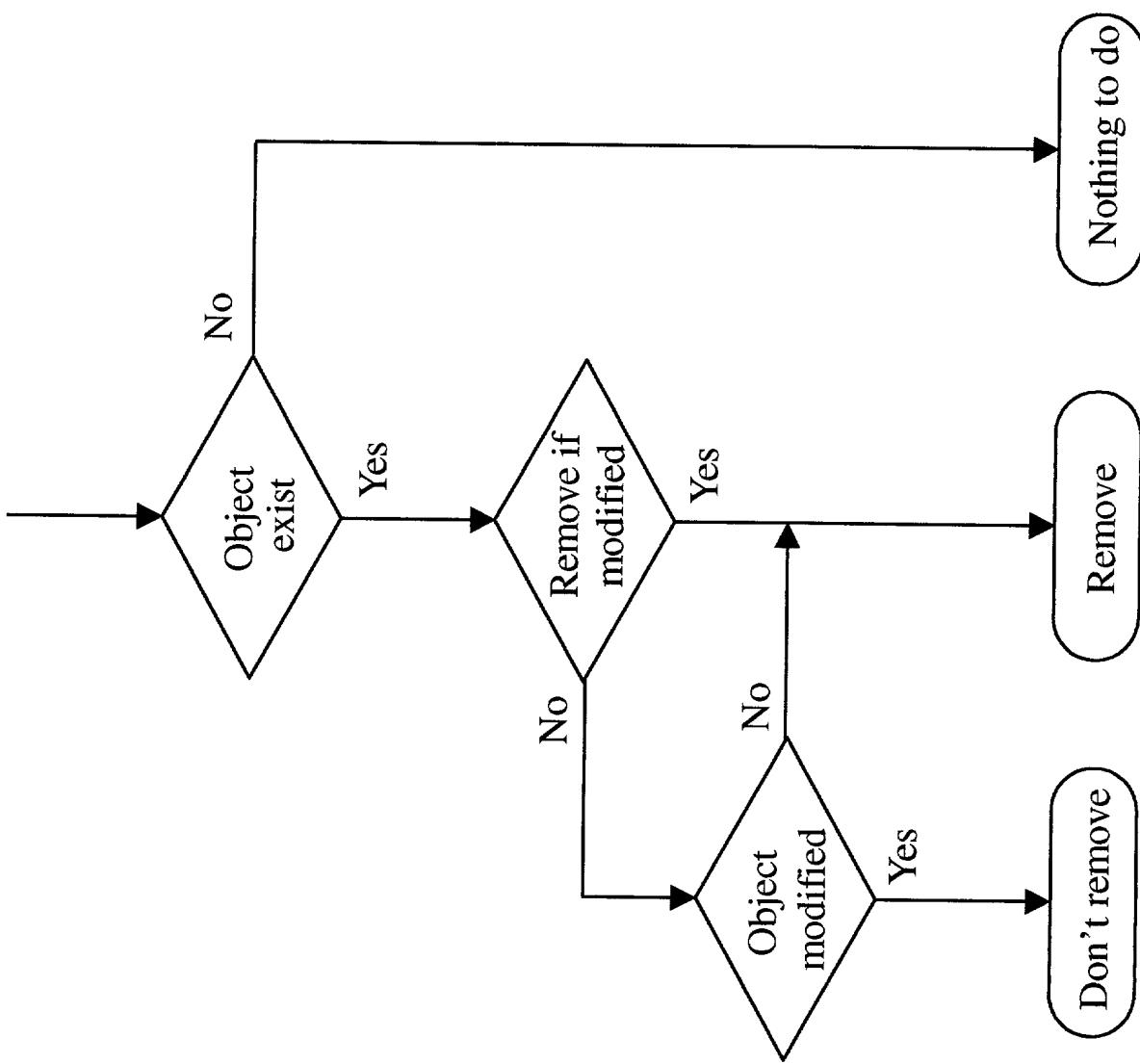


Figure 4

Figure 5



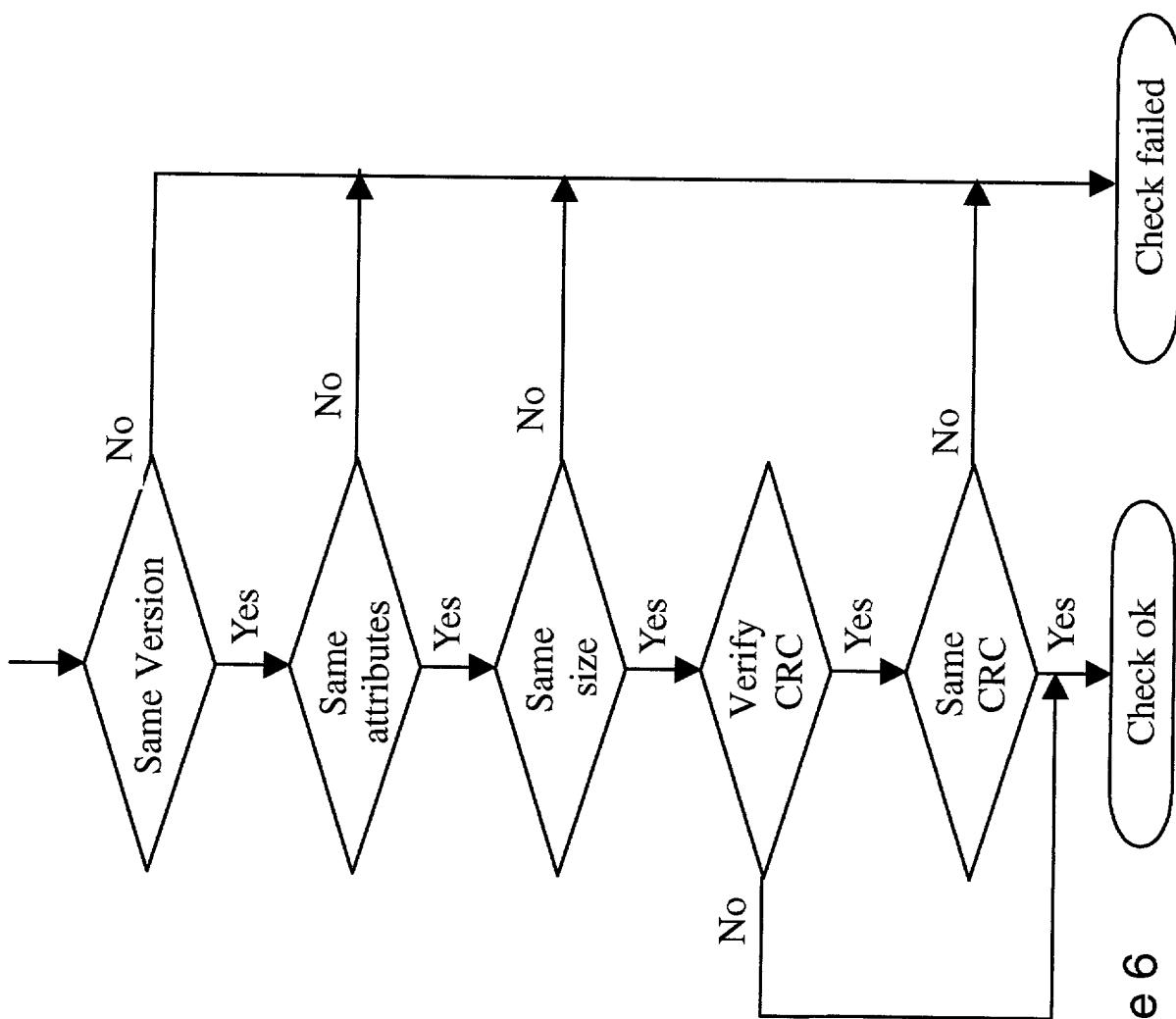


Figure 6

Object related actions	Registry Key and Value Shell Folder and Shortcut INI file Section and Item NT Service Profile Item Desktop Object, Folder, Program, Shadow Directory and File Text file line, command, token Symbolic link
System actions and Checks	Restart Check disk space
Program actions	Execute user program Execute MS Setup program Execute InstallShield program Execute CID Program

Figure 7

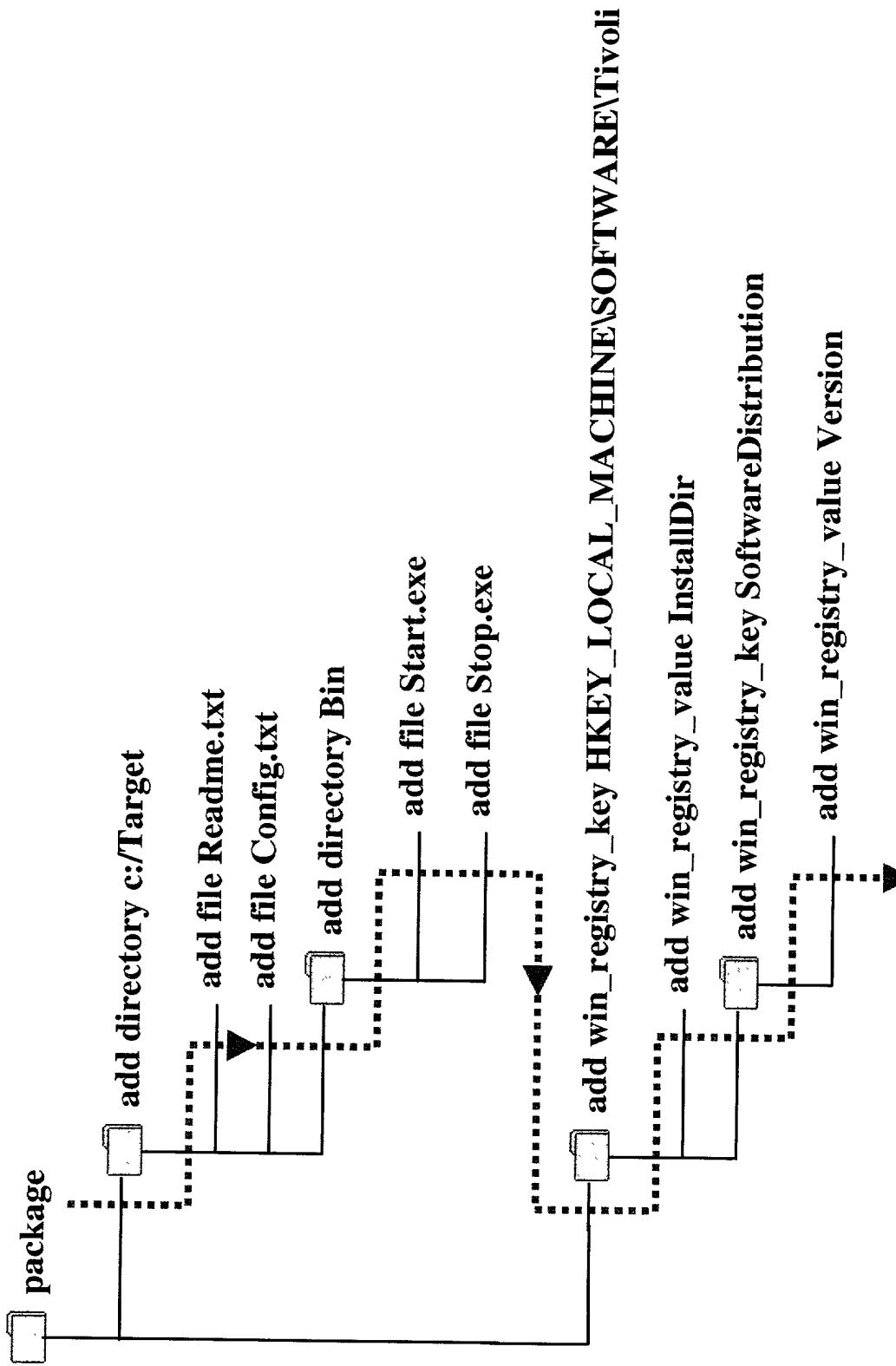
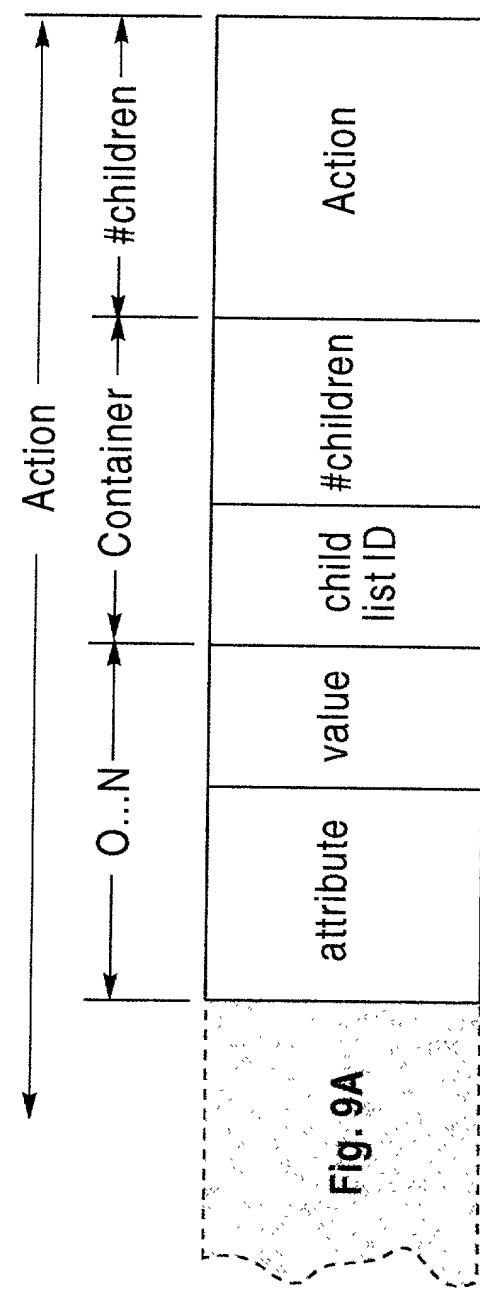
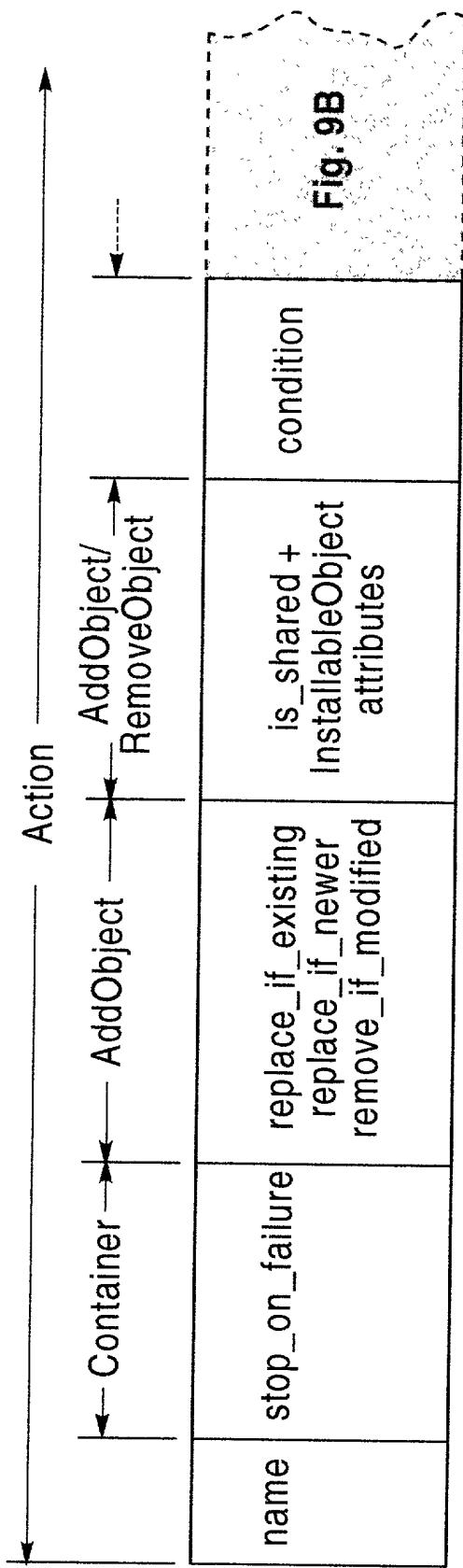


Figure 8

**Figure 9B**

"TME 10 Software Package v4.0 - SPDF" ← Signature of SPD

```

package
  name      = "Software Package"
  version   = "1.0"

check_disk_space
  volume = C:, 25M
  volume = D:, 35M
end

generic_container →
  condition = "${os_name} == Windows_NT" → Container stanza

add win_registry_key

parent_key = HKEY_LOCAL_MACHINE\SOFTWARE
key = "Registry Key"

win_registry_key
  key = "Nested Registry Key" → Attribute value pair
end
end
end

```

Figure 10

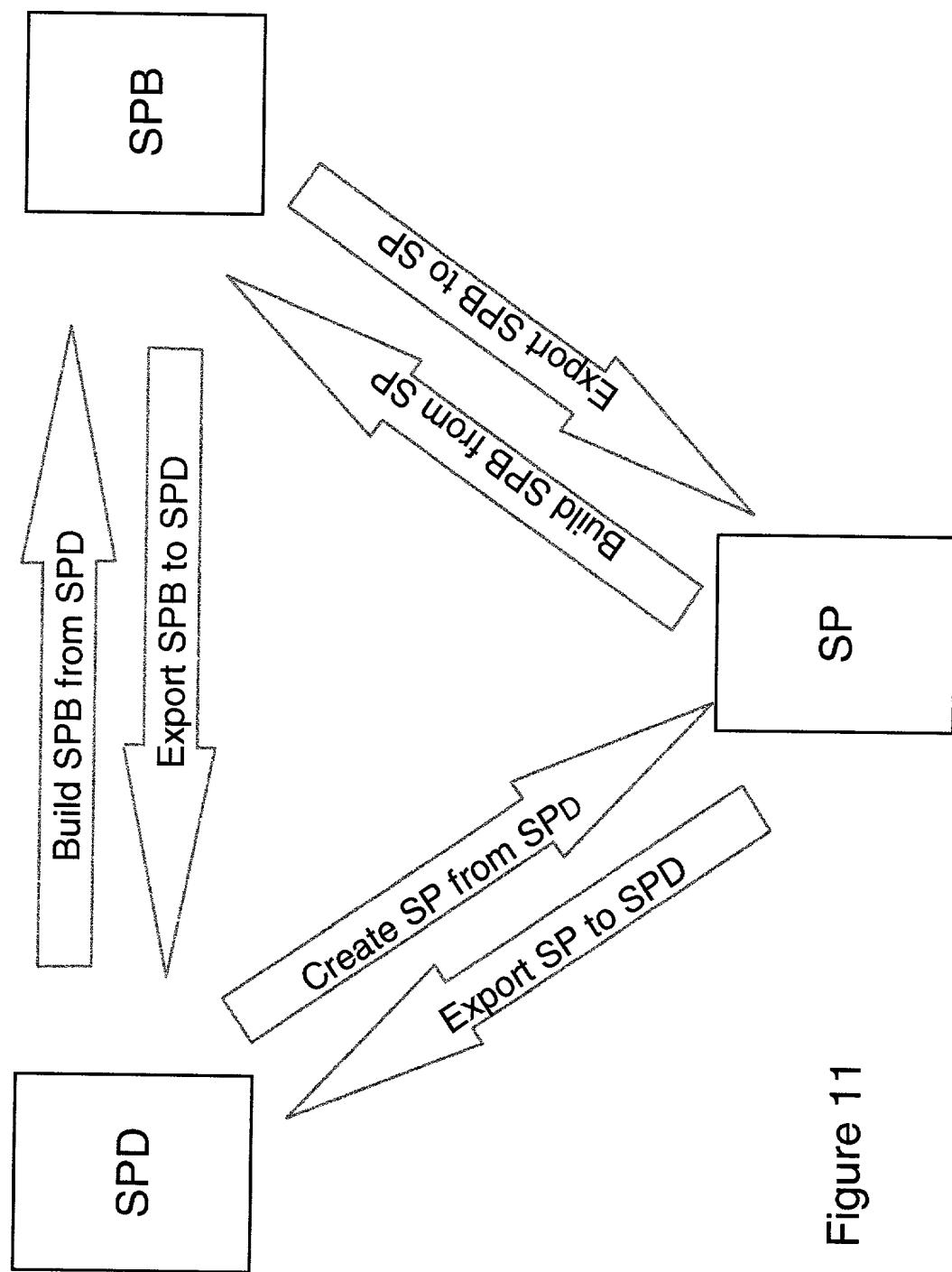


Figure 11

```
...  
add directory  
location      = c:/Winnt/System32/  
destination   = c:/Winnt/System32/  
  
file  
name          = MyApp.DLL  
end  
end  
  
add directory  
location      = c:/MyApp  
destination   = c:/MyApp  
descend_dirs = Y  
end  
...  
...  
add directory  
location      = c:/Winnt/System32/  
destination   = c:/Winnt/System32/  
descend_dirs = Y  
end  
...  
...
```

Figure 12A

Figure 12B

```
...
add directory
condition = "$($os_name) LIKE 'Win*'"
location      = C:/winnnt/system32
destination   = $(system_dir)
file

name = MyApp.DLL
end
end

add directory
condition = "$($os_name) == SunOS OR $($os_name) == AIX"
location      = C:/unix/
destination   = $(home_path)
file

name      = MyApp.a
end
end
...

```

Figure 12C

```

...
add directory
location      = C:/MyApp
destination   = $(target_dir)
file
name = MyApp.CFG
substitute_variables = Y

end
end
...

```

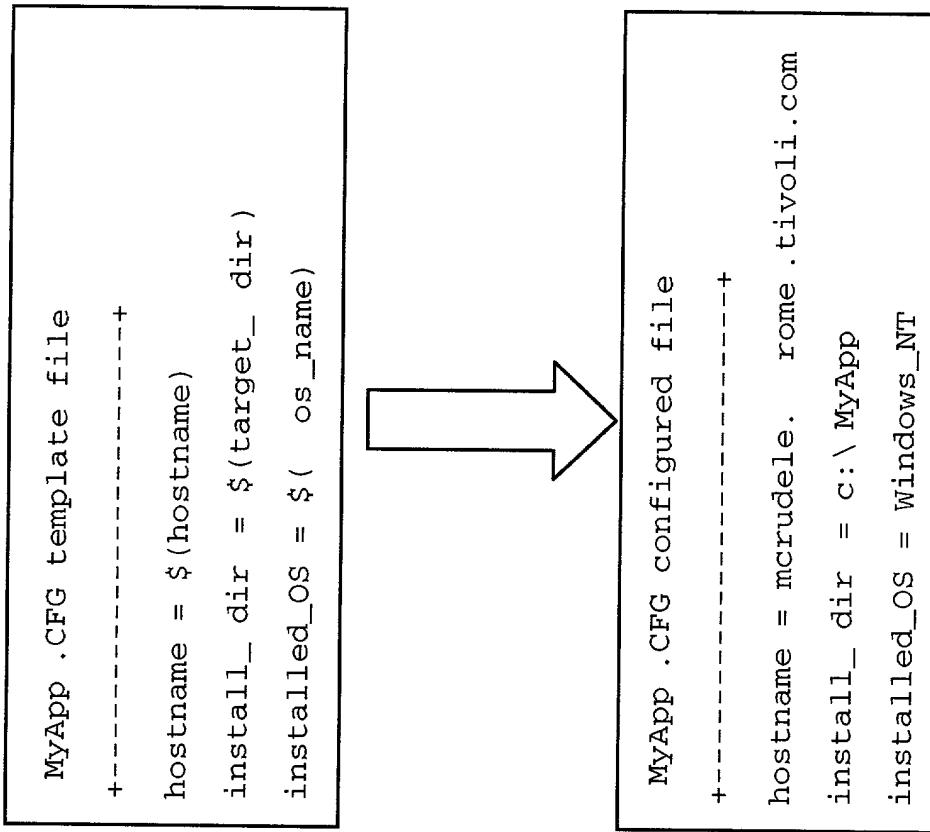


Figure 13A

Figure 13B

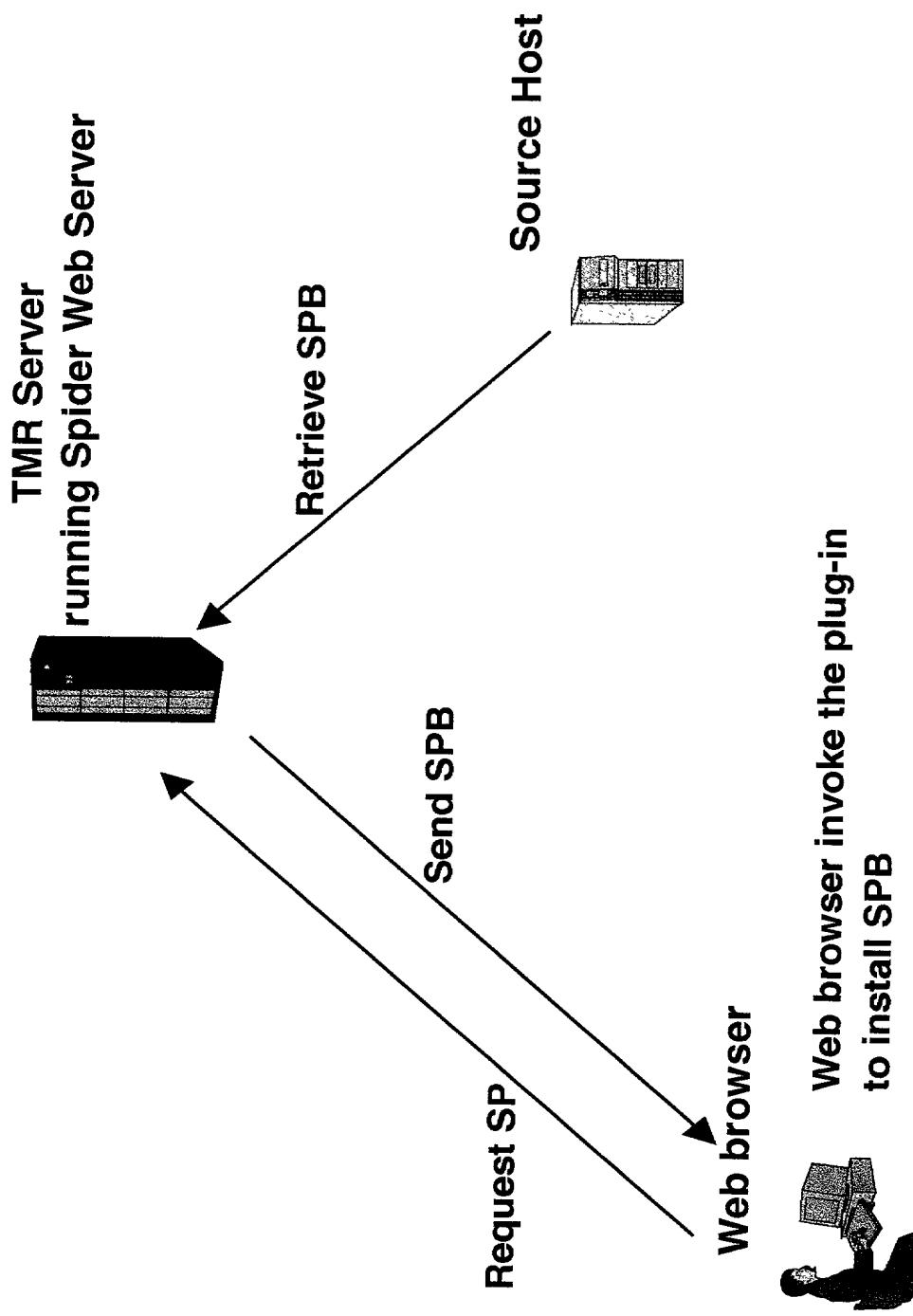


Figure 14

wdcrtsp	Create a SPB file from a SPD file
wdexptsp	Export a SPB file into SPD file
wdbldspb	Build a SPB file from a SP
autopack	Run AutoPack snapshots/differences
wdinstsp	Install a SPB
wdrmvsp	Remove a SP
wdcmmtsp	Commit a SP
wdundosp	Undo a SP Install/Remove
wdacptsp	Accept an undoable Install/Remove
wdversp	Verify the state of a SP

Figure 15

wimspspo	Associate a Software Package to a SPO
wconvspo	Convert the format of a SPO
wexpspo	Export a SPO into SPD file
wldsp	Loads SP on one or more Depots
wuldsp	UnLoad a SP from one or more Depots
winstsp	Install a SP
wremovsp	Remove a SP
wcommitsp	Commit a SP
wundosp	Undo a SP Install/Remove
waccptsp	Accept an undoable Install/Remove
wversp	Verify the state of a SP

Figure 16

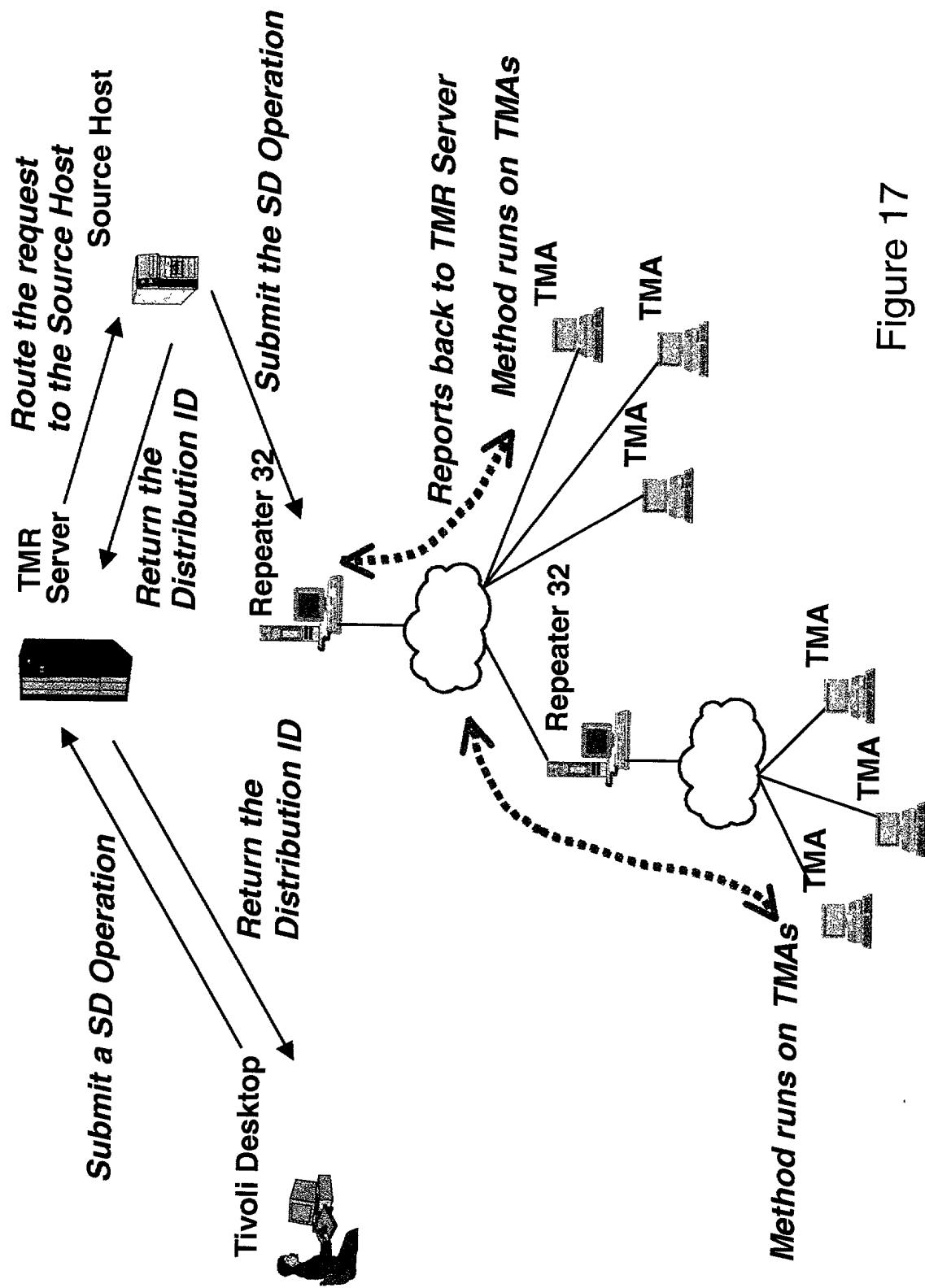


Figure 17

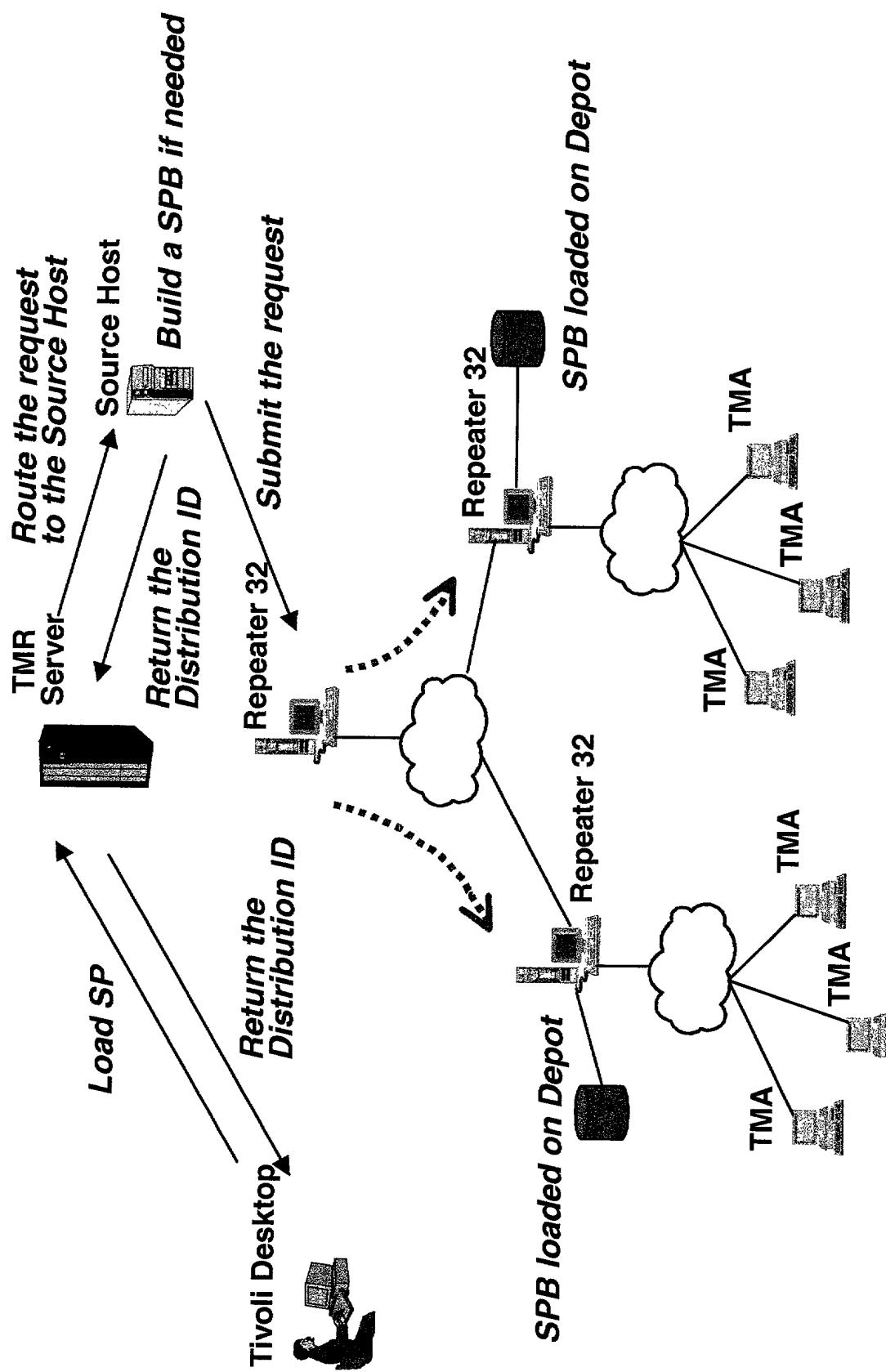


Figure 18

	Install	Remove	Accept	Undo	rollBack	Commit	Verify
transactional	X	X		X			
undoable	X	X					
undoable in transactional	X	X					
transactional & undoable	X	X					

Figure 19

Operation	State	Undo state	Reboot state	Flag
Install	Prepared	Prepared	ReBoot requested	Changing
Remove	Committed	Undoable	-	In Error
		Restored	-	-
		-		

I--- means that an Install has been committed
 ICU-- means that an Install has been committed and can be undone
 IP-BC means that an Install has been prepared and it will be committed during the next reboot
 RCU-- means that a Remove has been committed but it can be undone
 IC-E means that an Install has been committed but the SP is in error, so the application may not work properly

Figure 20

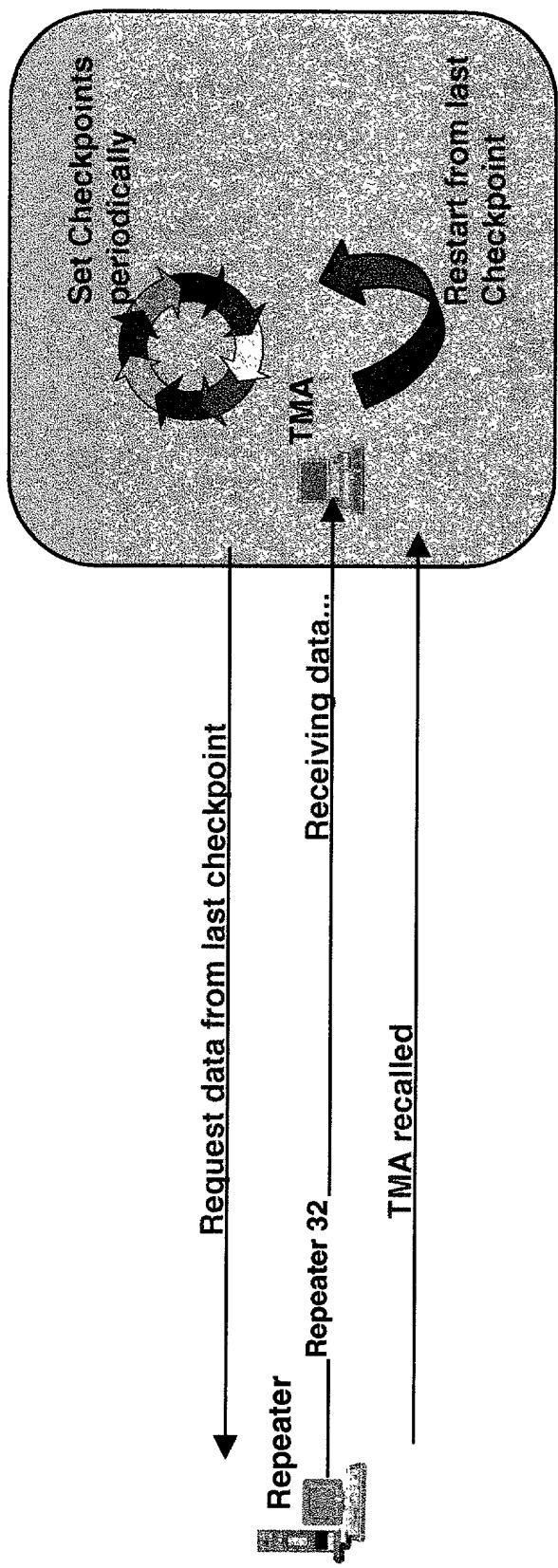


Figure 21

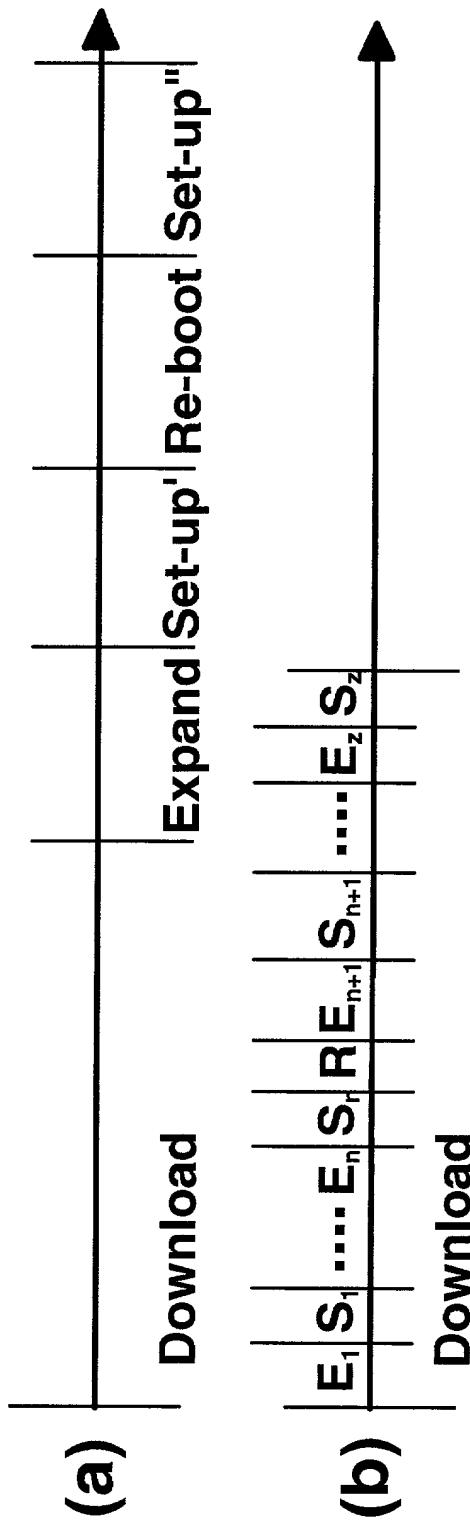


Figure 22

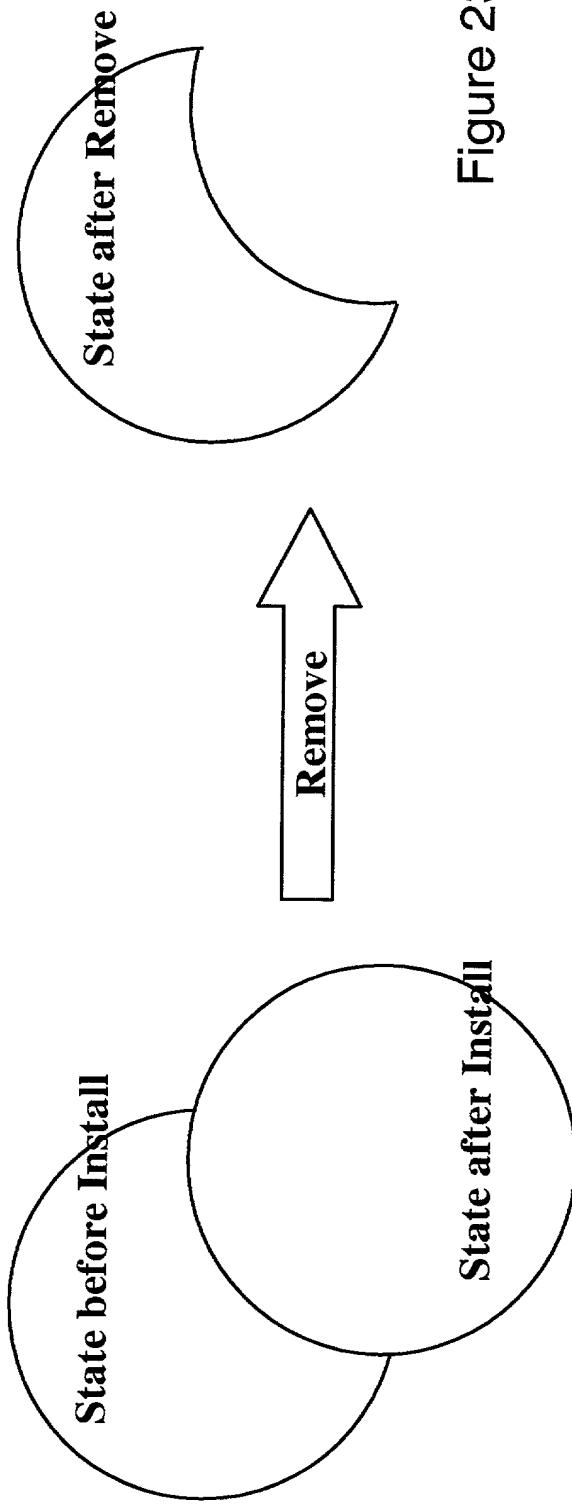


Figure 23

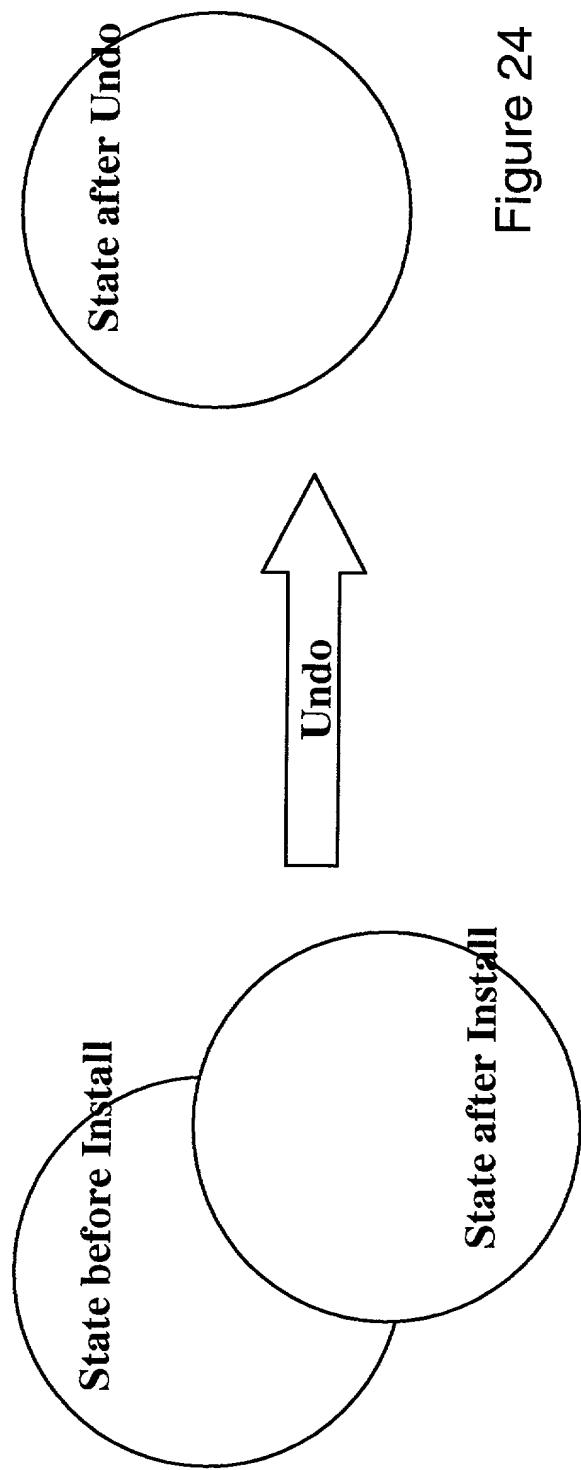


Figure 24

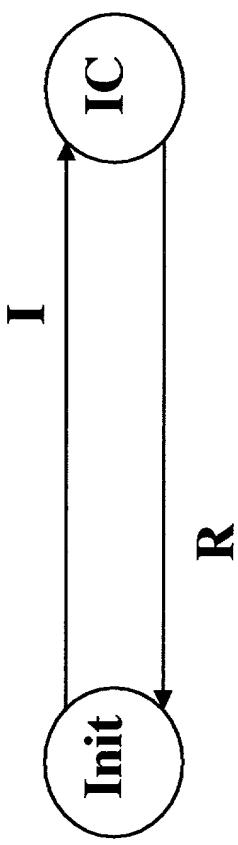


Figure 25A

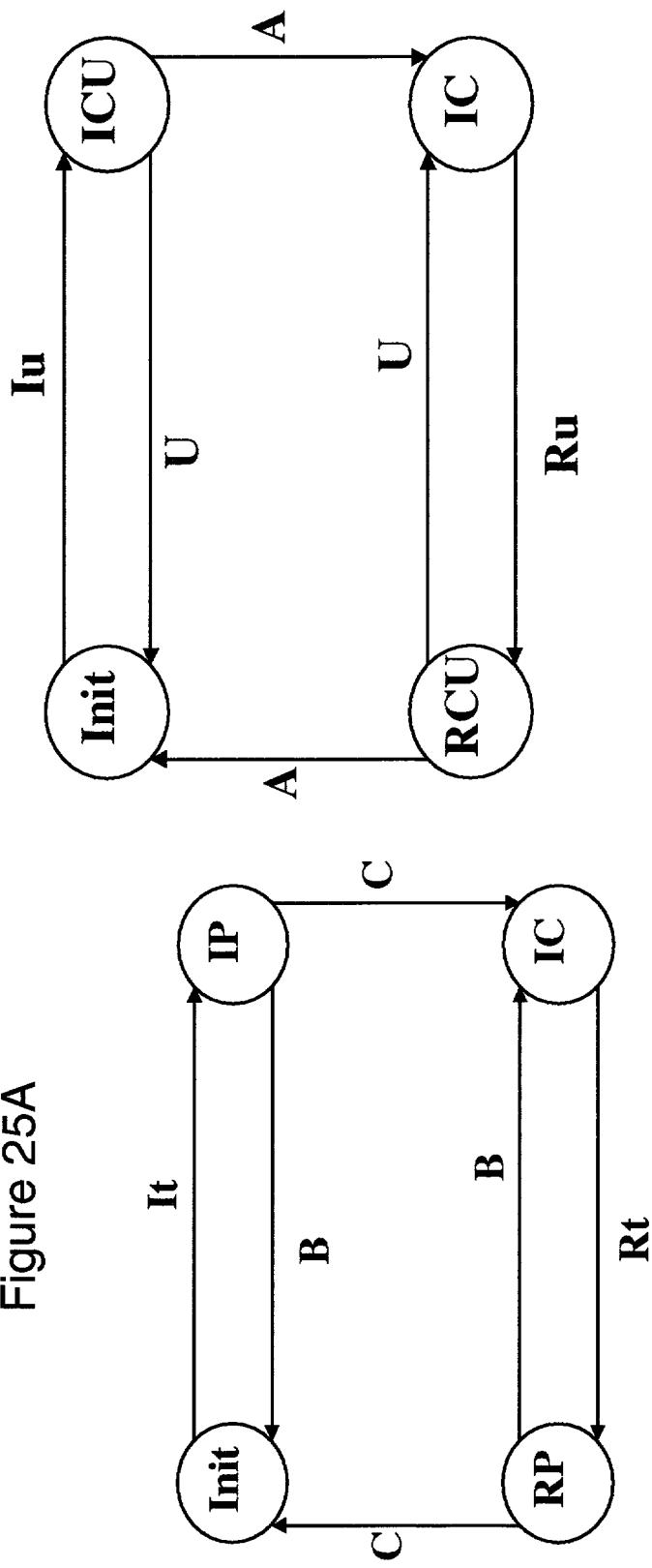
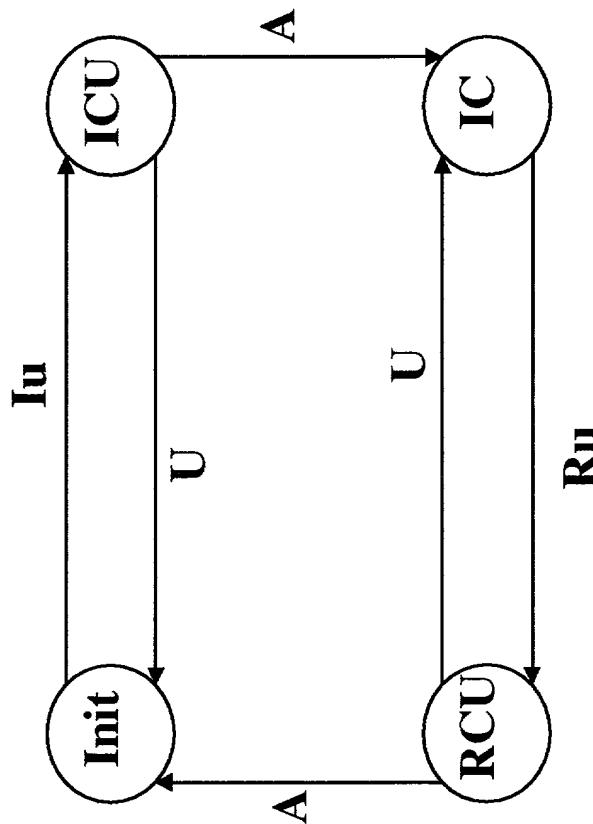


Figure 25B

Figure 25C



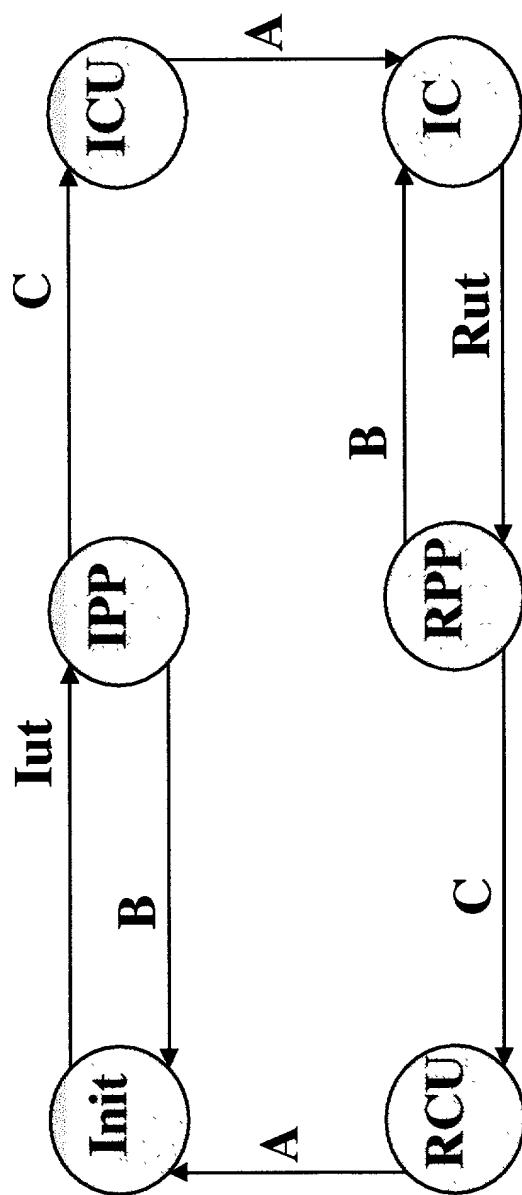


Figure 25D

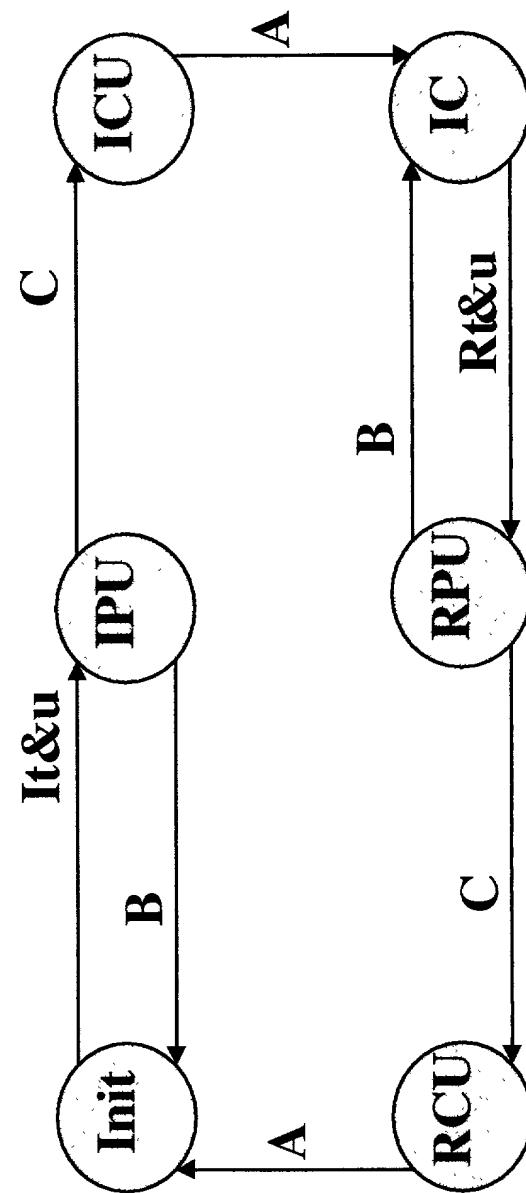


Figure 25E

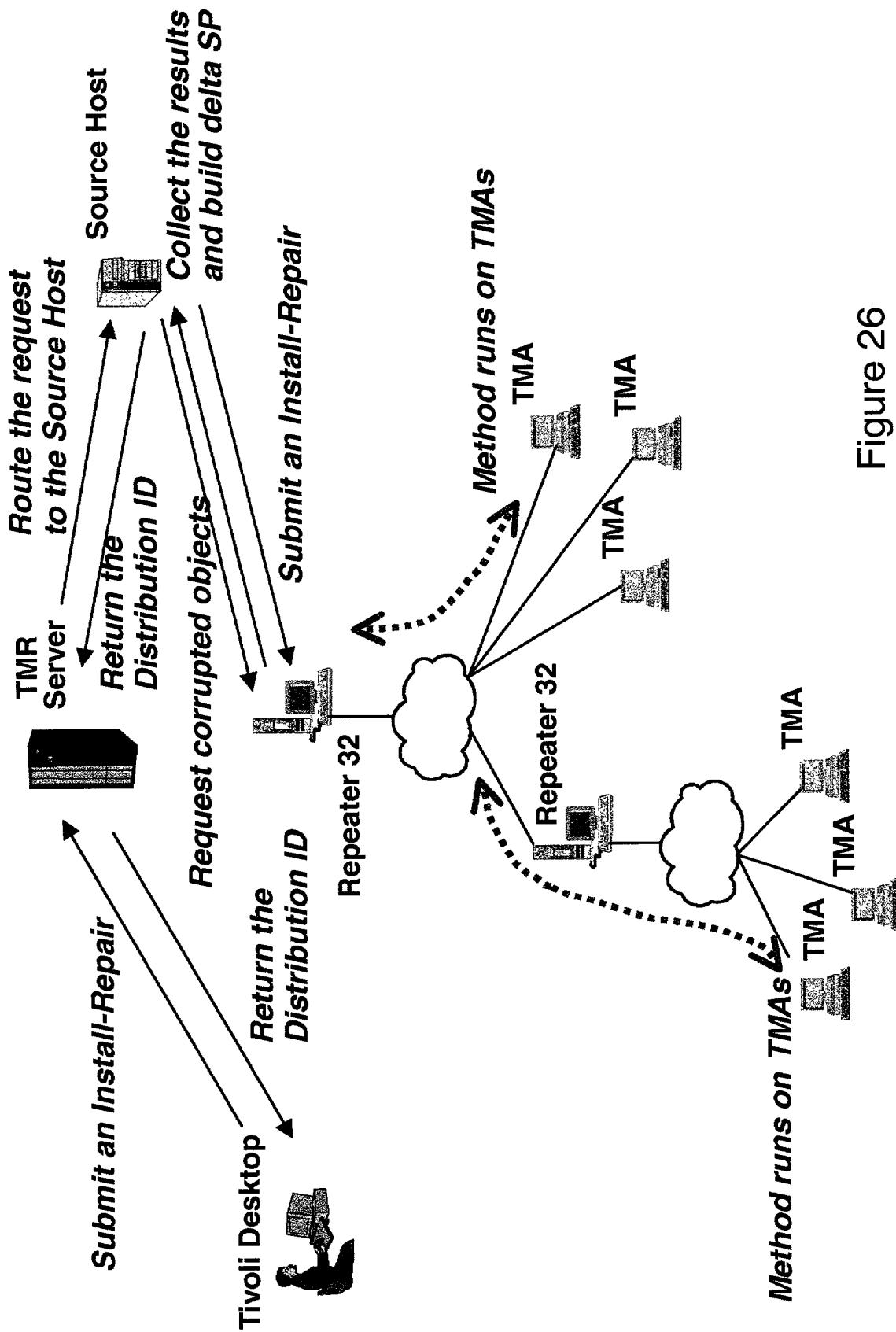


Figure 26

```
...
## Mount the image directory
execute_user_program
during_install
  name      = $(system_dir)/NET.EXE
  arguments = "USE $(freedrive_01) $(remote_name)"
end

## Run the setup to perform the installation
execute_mssetup_program
during_install
  name      = $(freedrive_01)/setup.exe
  arguments = "/Q1 /B1"
end

## U-mount the image directory
execute_user_program
during_install
  name      = $(system_dir)/NET.EXE
  arguments = "$(freedrive_01) /d"
end
...

```

Figure 27